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10/720,503	11/24/2003	Bertrand Haas	F-745	4579

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Pittney Bowes Inc.
Intellectual Property and Technology Law Dept.
35 Waterview Drive
P.O. Box 3000
Shelton, CT 06484

EXAMINER	
HENNING, MATTHEW T	
ART UNIT	PAPER NUMBER
2131	
MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/720,503	HAAS, BERTRAND	
	Examiner	Art Unit	
	MATTHEW T. HENNING	2131	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 May 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4-9 and 11-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *1,2,4-9 and 11-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *24 November 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *5/16/2008*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

This action is in response to the communication filed on 5/1/2008.

DETAILED ACTION

Claims 1-2, 4-9, and 11-19 have been examined.

Information Disclosure Statement

The information disclosure statement(s) (IDS) submitted on 5/16/2008 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the examiner is considering the information disclosure statements.

Response to Arguments

Applicant's arguments filed 5/1/2008 have been fully considered but they are not persuasive.

Regarding applicant's argument that Davidson and/or Cook did not disclose "applying a transformation to the watermarked digital image data to produce transformed watermarked digital image data, the transformation being at least approximately an inverse of **a** print-scan distortion transformation", the examiner does not find the argument persuasive. First, Davidson disclosed printing and scanning the watermarked digital image data, which meets the limitation of the claim language. Second, Davidson teaches in paragraphs 0063 and 0064 disclosed applying transfer functions to the image which was the inverse of the printing and scanning transfer functions. As such, the examiner does not find the argument persuasive.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., applying correction to the digital image data before printing; applying the transformation only to the watermark data; using a digital forward print-scan transformation to correct the watermark

characteristics against which the actual printing and scanned watermark is being matched) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Furthermore, this feature is obvious in view of Cook, as discussed in the rejection presented below.

Regarding the applicant's argument that the cited references do not disclose the following steps of claim 19 namely, (c) applying a print- scan distortion transformation to the watermarked digital image data to produce transformed watermarked digital image data; (d) retrieving a characteristic of the watermark as represented by the transformed watermarked digital image data produced at step (c); (g) retrieving a characteristic of the watermark as represented by the scanned image data produced at step (f); and (h) comparing the characteristic retrieved at step (d) with the characteristic retrieved at step (g). Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

Regarding the applicant's argument that Carr does not apply a transform and does not disclose any technique to increase the efficiency of watermarking, the examiner does not find the argument persuasive. This is because Carr is not relied upon as teaching such transformation.

Regarding the applicant's argument that the applicant does not do any processing at the same stage as Davidson, the examiner does not find the argument persuasive. Davidson has not been relied upon alone in making this rejection. In this case, it is the combination of Carr, Davidson, and Cook that renders the claim obvious. In response to applicant's arguments against

the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

With regards to the applicants amendments in order to overcome the rejection of the claims under 35 USC 101, the examiner notes that while the rejection of claim 1 and its dependant claims in view of 35 USC 101 has been overcome, the rejection of claims 11 and 15 has not. This is due to the fact that the claim language still only recites manipulation of data in a computer. As such, the claims do not result in a physical transformation outside the computer. Furthermore, the claims do not limit the scope of the claims to a practical application within the technological arts. Rather, no practical application has been recited in the claims. As such, the examiner has maintained the rejection of claims 11 and 15 under 35 USC 101 below.

All objections and rejections not set forth below have been withdrawn.

Claim Objections

Claim 4 is objected to because of the following informalities: Claim 4 depends from claim 3, which has been cancelled. The examiner has assumed that this should have been changed to depend from claim 2, as claim 3 had depended from claim 2 previously. Appropriate correction is required.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 11 and 15 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Regarding claims 1, 2, 6, 11, and 15, a method which merely manipulates data is claimed.

> *A claim that requires one or more acts to be performed defines a process. However, not all processes are statutory under 35 U.S.C. 101. Schrader, 22 F.3d at 296, 30 USPQ2d at 1460. To be statutory, a claimed computer-related process must either: (A) result in a physical transformation outside the computer for which a practical application in the technological arts is either disclosed in the specification or would have been known to a skilled artisan (discussed in i) below), or (B) be limited to a practical application within the technological arts (discussed in ii) below). See Diamond v. Diehr, 450 U.S. at 183-84, 209 USPQ at 6 (quoting Cochrane v. Deener, 94 U.S. 780, 787-88 (1877)) ("A [statutory] process is a mode of treatment of certain materials to produce a given result. It is an act, or a series of acts, performed upon the subject-matter to be transformed and reduced to a different state or thing.... The process requires that certain things should be done with certain substances, and in a certain order; but the tools to be used in doing this may be of secondary consequence."). See also Alappat, 33 F.3d at 1543, 31 USPQ2d at 1556-57 (quoting Diamond v. Diehr, 450 U.S. at 192, 209 USPQ at 10). See also id. at 1569, 31 USPQ2d at 1578-79 (Newman, J., concurring) ("unpatentability of the principle does not defeat patentability of its practical applications") (citing O'Reilly v. Morse, 56 U.S. (15 How.) at 114-19). If a physical transformation occurs outside the computer, a disclosure that permits a skilled artisan to practice the claimed invention, i.e., to put it to a practical use, is sufficient. On the other hand, it is necessary for the claimed invention taken as a whole to produce a practical application if there is only a transformation of signals or data inside a computer or if a process merely manipulates concepts or converts one set of numbers into another.*
>
> **See MPEP § 2106.2(b)**

These claims are solely directed towards manipulation of data, and the claims provide no details as to how the private values are used (i.e. a practical application). Therefore, the claims recite only data transformation inside a computer. As such, claims 1, 2, 6, 11, and 15 fail to meet the statutory requirements of 35 USC 101.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1,2, 4, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davidson et al. (Patent Application Publication 2001/0040979), hereinafter referred to as Davidson, and further in view of Cook (US Patent Number 5,271,096).

Regarding claim 1, Davidson disclosed a method comprising: providing digital image data that represents an image (See Davidson Fig. 4A Step 420A and Paragraph 0061); applying a digital watermark to the digital image data to produce watermarked digital image data (See Davidson Fig. 4A Step 421 and Paragraph 0061); and applying a transformation to the watermarked digital image data to produce transformed watermarked digital image data (See Davidson Fig. 4A Step 422 and Fig. 4B Step 423 and Paragraphs 0061-0062 wherein the transformation is the transfer functions associated with printing and scanning the image and the print-scan distortion transformation is the compensating transfer functions; or See Davidson Fig. 4B Steps 425-426 and Paragraphs 0063-0064 wherein the transformation is the compensation transfer functions) , the transformation being at least approximately an inverse of a print-scan distortion transformation (See Davidson Paragraphs 0062-0064), but Davidson failed to disclose printing an image on the basis of the transformed watermarked digital image data, and instead

taught performing the inverse transformation after the watermarked digital image data was printed.

Conversely, Cook teaches an alternative to post correction in that by applying the inverse transformation prior to printing, the image resulting from printing will be substantially identical to the input image (See Cook Col. 3 Lines 16-34 and Col. 5 Paragraphs 1-2).

It would have been obvious to the ordinary person skilled in the art at the time of invention to have applied the teachings of Cook in the printing and scanning system of Davidson by applying the compensating (inverse) transfer functions to the image prior to printing the image. This would have been obvious been obvious because the ordinary person skilled in the art would have been motivated to provide correct image data immediately upon scanning the data. Furthermore, this would have been obvious because the ordinary person skilled in the art would have recognized that applying the corrective action before or after would provide the same result.

Regarding claim 2, Davidson teaches applying the digital watermark to the digital image data (See Davidson Fig. 4), but fails to disclose applying the print-scan distortion transformation to the digital image data prior to embedding the watermark in the digital image data.

Cook teaches that in order to calibrate a printing and scanning distortion corrective filter, that a calibration image should be printed and scanned and then analyzed to determine the anti-distortion data needed to correct for the distortion in order to output an image substantially identical to an input image (See Cook Col. 3 Lines 16-34).

It would have been obvious to the ordinary person skilled in the art at the time of invention to employ the teachings of Cook in the distortion compensation system of Davidson by

printing and scanning a calibration image in order to determine the anti-distortion filter to be used to correct the distortion. This would have been obvious because the ordinary person skilled in the art would have been motivated to properly calibrate the anti-distortion filters (See Cook Col. 3 Lines 16-34). Furthermore, it would have been obvious to the ordinary person skilled in the art at the time of invention, to utilize the input image which is to be marked as the calibration image, as this would provide the most accurate representation of how the input image will be distorted by the printer and scanner.

Regarding claim 4, Davidson and Cook disclosed scanning the printed image to produce scanned image data (See Davidson Fig. 4).

Regarding claim 5, Davidson and Cook disclosed analyzing the scanned image data to retrieve the watermark therein (See Davidson Fig. 4B Step 424 and Paragraph 0063).

Claims 6-9, and 11-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carr et al. (Patent Application Publication 2003/0130954) hereinafter referred to as Carr, and further in view of the combination of Davidson and Cook, as applied to claims 2 and 3 above.

Regarding claim 19, Carr disclosed a method comprising: (a) providing digital image data that represents an image (See Carr Paragraphs 0025-0026 marketing image); (b) applying a digital watermark to the digital image data to produce watermarked digital image data (See Carr Paragraph 0026); (d) retrieving a characteristic of the watermark (See Carr Paragraph 0028); (e) printing an image on the basis of the watermarked digital image data produced at step (b) (See Carr Paragraph 0014); (f) scanning the printed image to produce scanned image data (See Carr Paragraph 0036); (g) retrieving a characteristic of the watermark as represented by the scanned image data produced at step (f) (See Carr Paragraph 0036); and (h) comparing the characteristic

retrieved at step (d) with the characteristic retrieved at step (g) (See Carr Paragraph 0028); but Carr failed to disclose step (c) applying a print-scan distortion transformation to the watermarked digital image data to produce transformed watermarked digital image data.

Davidson and Clark teach that in order to better facilitate in the retrieval of a watermark from an image that is printed and scanned, an anti-distorted image should be created prior to printing and scanning (See the rejection of claim 3 above).

It would have been obvious to the ordinary person skilled in the art at the time of invention to employ the teachings of Davidson and Clark in the watermarked postage metering system of Carr by creating an anti-distorted marketing image prior to printing and scanning. This would have been obvious because the ordinary person skilled in the art would have been motivated to improve the detection of the watermark data.

Regarding claim 11, Carr disclosed a method comprising: providing watermark data that represents a digital watermark (See Carr Paragraph 0026); providing digital image data that represents an image; and combining the watermark data with the digital image data to produce watermarked digital image data (See Carr Paragraph 0026); but Carr failed to disclose applying a transformation to the watermark data to produce transformed watermark data, the transformation being at least approximately an inverse of a print-scan distortion transformation, and combining the image data with the transformed watermark data to produce the watermarked digital image data. However, Carr did disclose the watermark being fragile and that preferably the watermark data be hidden without leaving human-apparent evidence of alteration.

Davidson and Clark teach that in order to better facilitate in the retrieval of a watermark from an image that is printed and scanned, an anti-distorted image should be created prior to printing and scanning (See the rejection of claim 3 above).

It would have been obvious to the ordinary person skilled in the art at the time of invention to employ the teachings of Davidson and Clark in the watermarked postage metering system of Carr by creating an anti-distorted marketing image prior to printing and scanning. This would have been obvious because the ordinary person skilled in the art would have been motivated to improve the detection of the watermark data. It further would have been obvious to the ordinary person skilled in the art at the time of invention to only apply the anti-distortion filtering to the watermark data. This would have been obvious because the ordinary person skilled in the art would have been motivated to leave as little human-apparent evidence of alteration as possible.

Regarding claim 12, Carr, Davidson and Clark taught printing an image on the basis of the watermarked digital image data (See Carr Paragraph 0014).

Regarding claim 13 Carr, Davidson and Clark taught scanning the printed image to produce scanned image data (See Carr Paragraph 0036).

Regarding claim 14, Carr, Davidson and Clark taught analyzing the scanned image data to retrieve the watermark therein (See Carr Paragraph 0036).

Regarding claims 6 and 15, Carr, Davidson and Clark taught loading the watermarked digital image data into a postage meter (See Carr Paragraph 0026).

Regarding claims 7 and 16, Carr, Davidson and Clark taught using the postage meter to print a postage indicia on a mail piece, the postage meter indicia including a printed image based on the watermarked digital image data (See Carr Paragraph 0014).

Regarding claims 8 and 17, Carr, Davidson and Clark taught scanning the printed image to produce scanned image data (See Carr Paragraph 0036).

Regarding claims 9, and 18, Carr, Davidson and Clark taught analyzing the scanned image data to retrieve the watermark therein (See Carr Paragraph 0036).

Conclusion

Claims 1, 2, 4-9, and 11-19 have been rejected.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MATTHEW T. HENNING whose telephone number is (571)272-3790. The examiner can normally be reached on M-F 8-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (571) 272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Matthew T Henning/

Patent Examiner, Art Unit 2131

/Ayaz R. Sheikh/

Supervisory Patent Examiner, Art Unit 2131